

# accuMAG™ Register

## Data Sheet

### THE ACCUMAG ELECTRONIC REGISTER

The Sensus accuMAG Register provides the enhanced features and benefits that are available with the Sensus ICE Register. The register is fully compliant with ANSI/AWWA Encoder Standard C707-10.

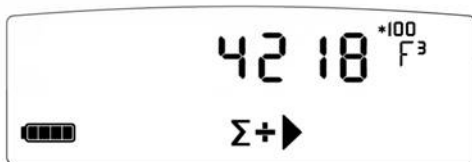
The Sensus accuMAG electronic register is available in either non-submersible (i.e. weatherproof) or a submersible (i.e. waterproof) enclosure. The register may be mounted directly to the meter or remotely. The remote register can be located 30 to 75 feet from the meter. The display contains AMR and a high-resolution Resettable Test Totalizer. The accuMAG register features:

- AMR resolution units - fully programmable
- Integral resettable accuracy testing feature
- Two electronic outputs - enable links to AMR/AMI systems and SCADA systems at the same time
- Large, easy-to-read LCD
- Standard display shows AMR digits and flow rate
- Field replaceable batteries

### ASCII-BASED PROTOCOL FOR COMPATIBILITY WITH OTHER BRANDS OF READERS

The Sensus accuMAG Register extends the use of the ASCII-based communication protocol first utilized by Sensus in 1984. The meter reading data, which consists of the odometer reading and register ID number, are transmitted in ASCII code, the standard data code used by most of the data communications industry. ASCII encoding methodology requires that a complete reading of a register wheel contain 10 bits of information, which includes a “start”, “stop” and a “parity” bit. The parity bit is used as a self-check to insure that the interrogation device has correctly received the data from each wheel.

Although additional data fields have been incorporated, it can be read by any handheld or AMR reading device that could read ICE or OMNI registers. Now widely considered to be the defacto industry standard, the Sensus 3-wire AMR interface protocol is made available free of charge to other AMR equipment manufacturers, thereby promoting accuMAG register compatibility with present and future AMR networks.



accuMAG Register Display



Waterproof Enclosure



Remote Enclosure

### IMPROVED RESOLUTION FOR TESTING AND VISUAL READING

With its eight odometer digits and resettable test totalizer, testing the accuracy of an accuMAG water meter fitted with the electronic register is greatly enhanced. Visual readings in the test mode are more precise by a factor of one hundred, thereby enabling a precise comparison with the volume “standard” of the testing equipment. Decimal points on the dial face are used to separate whole units from fractional measurement units. Following tradition, the meter’s unit of measurement, gallons, cubic feet, imperial gallons, or acre feet, is displayed on the register face.

# accuMAG™ Register

## Sales Sheet

### PERMANENT, FACTORY-SET ID NUMBER

The accuMAG electronic register incorporates a unique, never-duplicated identification number that is factory-set into the register's non-volatile electronic memory. The exclusive ID number can be used to identify a particular meter and link it in a utility's billing computer to the customer served by that meter.

### UTILITY PROGRAMMABILITY

The Sensus accuMAG electronic register has four data fields that can be programmed by a utility for incorporating and gathering useful information.

One field could be used to identify the register's unit of measurement. Another to identify a reading multiplier. A third, 12 character field could be used to incorporate a unique ID number. And lastly, a 20 character alphanumeric data field could be used to indicate meter size, a customer account number or address, or to identify the utility to protect against inadvertently picking up readings from an adjoining utility's meters.

### TWO OR THREE-WIRE REGISTER INTERROGATION TECHNOLOGY

The Sensus accuMAG electronic register can be interrogated in either two-wire mode or three-wire AMR mode. This makes it totally compatible for incorporation into existing systems such as two-wire TouchRead or three-wire RadioRead, or fixed base systems. This feature makes it easy and economical for a utility that starts out with a TouchRead System to easily upgrade to a more advanced AMR system without having to replace the registers on its meters.

### WATERPROOF ENCLOSURE

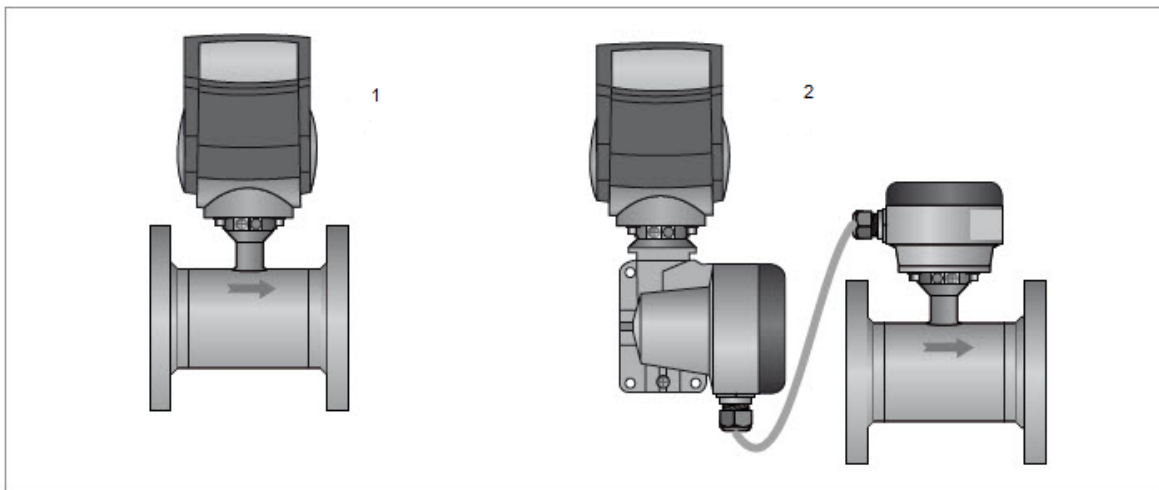
An important requirement for insuring meter reading integrity and accuracy is to protect a register's electronic components from moisture, dirt, sunlight and mechanical damage. This is crucial for meters installed underground in meter boxes and vaults that are subject to flooding, as the potential exists for moisture to pass through a register's cover and damage its electronic components. The accuMAG waterproof electronic register protects the electronic components from moisture in pit-sets up to four feet in depth.

### PROTECTION OF WIRING CONNECTIONS

Another important requirement for maintaining reading integrity is to insure that wiring connections are protected from moisture, and especially critical for providing long-term operational stability in pit-set environments. To prevent moisture-infiltration, connection components on Sensus accuMAG waterproof electronic registers utilize special waterproof connectors.

### DOCUMENTATION

For more detailed accuMAG meter information, please see the Sensus website at [www.sensus.com](http://www.sensus.com).



**1 Attached Non-submersible**

**2 Remote Mounted**

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